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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/631,212	08/03/2000	Nicolas Vasquez	5150-44800	1157

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EXAMINER	
GROSS, KENNETH A	

ART UNIT	PAPER NUMBER
2122	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/631,212	VASQUEZ ET AL.
	Examiner	Art Unit
	Kenneth A Gross	2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-63* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 29, 30, 32-36, 39, 46-48, 53, 54, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Donoho et al. (U.S. Patent Number 6,263,362) and further in view of Meyer (U.S. Patent Number 5,940,296).

In regard to Claim 29, Lindsey teaches: (a) receiving user input selecting a problem from a plurality of problems (Column 5, line 67 and Column 6, lines 1-3). Lindsey teaches a user interface, where the interface allows users to "select" objects in order to describe a "desired function" (Column 6, lines 2-3); and (b) automatically creating a prototype including a plurality of elements in response to the selected problem wherein the plurality of elements are operable to perform a process that solves a selected problem (Column 2, lines 65-67 and Column 3, lines 1-15). Lindsey does not teach displaying information indicating a plurality of problems. Donoho, however, does teach displaying a number of relevant problems where a number of automatic solutions are made available (Column 7, lines 32-39 and lines 54-56), one such solution is to identify a script to effect the solution. Neither Lindsey nor Donoho teach that the problem is a machine vision problem. Meyer, however, does teach solving machine vision problems using a visual element construction system (Column 2, lines 32-42). Therefore it would have been

obvious to one of ordinary skill in the art at the time of the invention to receive user input specifying a problem from a plurality of problems and automatically create a prototype including a plurality of elements in response to the specified problem as taught by Lindsey, where the plurality of problems are displayed to the user as taught by Donoho, since this allows the user to effect solutions for a number of predetermined problems, and the problem is a machine vision problem, as taught by Meyer, since this allows the prototype to solve a number of problems relating to machine vision.

In regard to Claim 30, Meyer teaches that a vision problem includes measurement (Column 2, lines 48-57).

In regard to Claim 32, the examiner takes official notice that filtering, morphology, thresholding, and particle filtering functions are well known functions for image processing, and hence for solving image processing problems.

In regard to Claim 33, the examiner takes official notice that histogram, line profile, particle analysis, and 3D view functions are well known functions for image analysis, and hence for solving image analysis problems.

In regard to Claim 34, the examiner takes official notice that edge detection, blob analysis, pattern matching, shape matching, caliper, and color matching functions are well known functions for machine vision problems, and hence for solving machine vision problems.

In regard to Claim 46, Donoho teaches using a script to perform a solution to the problem (Column 7, line 51).

In regard to Claim 47, Lindsey teaches an object-orientated representation of the machine vision process wherein the elements comprise representing respective vision operations (Column 3, lines 16-26).

In regard to Claim 48, Meyer teaches that the prototype comprises a diagrammatic representation of the machine vision process, and wherein the elements comprise diagrammatic objects representing respective machine vision operations (Figure 4).

Claims 53, 54, and 57 correspond with Claim 29 and are rejected for the same reasons as Claim 29.

Claims 35, 36, 39, and 58 contain limitations, which have already been addressed in the rejections of Claims 2, 3, 6, and 23, respectively, and Claims 35, 36, 39, and 58 are rejected for the same reasons as these Claims. For specific rejections of Claims 2, 3, 6, and 23, see the office action mailed on June 6th, 2003.

3. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Donoho et al. (U.S. Patent Number 6,263,362) and further in view of Meyer (U.S. Patent Number 5,940,296) and Fukushima et al. (U.S. Patent Number 5,940,530).

In regard to Claim 31, Lindsey, Donoho, and Meyer teach the method of Claim 29, but do not teach that displaying information indicating a plurality of machine vision problems comprises displaying the plurality of machine vision problems categorized by one or more of color, shape, and pattern. Fukushima, however, does teach categorizing images, which have a need to be analyzed, by pattern (Column 5, lines 43-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform the method of Claim 29,

as taught by Lindsey, Donoho, and Meyer, where displaying information indicating a plurality of machine vision problems comprises displaying the plurality of machine vision problems categorized by one or more of color, shape, and pattern, since this allows a universal solution to be applied to overall categories of image problems.

4. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Donoho et al. (U.S. Patent Number 6,263,362) and further in view of Meyer (U.S. Patent Number 5,940,296) and "Windows 98 For Dummies" by Andy Rathbone (hereinafter Rathbone).

Claim 40 contains limitations that have already been addressed in the rejection of Claim 7, and Claim 40 is rejected for the same reasons as this Claim. For specific rejections of Claim 7, see the office action mailed on June 6th, 2003.

5. Claims 49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Meyer (U.S. Patent Number 5,940,296).

In regard to Claim 49, Lindsey teaches: (a) installing a prototyping environment application operable to automatically create a plurality of prototypes, wherein each prototype is configured to perform a process to solve a problem (Column 2, lines 65-67 and Column 3, lines 1-15). The user interface is obviously installed on the computer before it is operated; (b) receiving solution information after said installing, wherein the solution information includes information enabling the prototyping environment application to automatically create a new prototype (Column 7, lines 1-19); (c) providing user input requesting that the prototyping environment automatically create the new prototype using the solution information (Column 6, lines 32-37). Lindsey does not teach that the environment is a machine vision prototyping

environment, or the prototypes are machine vision prototypes, or the process is a machine vision process, or that the problem is a machine vision problem. Meyer, however, does teach a machine vision environment for constructing machine vision prototypes to solve machine vision problems (Column 2, lines 32-42). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform the steps of installing, receiving, and providing, as taught by Lindsey, where the environment is a machine vision prototyping environment, the prototypes are machine vision prototypes, the process is a machine vision process, and t the problem is a machine vision problem, as taught by Meyer, since this allows the prototype to solve a number of problems relating to machine vision.

Claim 51 contains limitations that have already been addressed in the rejection of Claim 16, and Claim 51 is rejected for the same reasons as this Claim. For specific rejections of Claim 16, see the office action mailed on June 6th, 2003.

6. Claims 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Meyer (U.S. Patent Number 5,940,296) and further in view of Donoho et al. (U.S. Patent Number 6,263,362).

In regard to Claim 50, Lindsey and Meyer teach the method of Claim 49, and Lindsey further teaches: (a) a second software developer (the user of the software generator) that provides specification information that specifies how to construct solution information for the prototyping environment application (Column 5, line 67 and Column 6, lines 1-3); (b) constructing solution information according to the specification information in response to the user input from the second software developer, wherein the solution information enables the prototyping environment application to automatically create a new prototype (Column 6, lines 32-37); (c) the

software developer, who uses the user interface tool, constructs solution information to solve a particular problem by creating a program that acts with a desired function. Lindsey does not teach a first software developer that transfers specification information to the second software developer. However, Donoho does teach transferring problem information that specifies the solution information for solving the specified problem (Column 7, lines 54-56). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide specification information from a second software developer and constructing a machine vision solution information according to the specification information as taught by Lindsey, where the specification information is transferred from a first software developer to a second software developer, as taught by Donoho, since this allows the first software developer to focus on finding problems, and the second software developer to focus on creating solutions.

7. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Meyer (U.S. Patent Number 5,940,296) and further in view of Donoho et al. (U.S. Patent Number 6,263,362) and "Windows 98 For Dummies" by Andy Rathbone (hereinafter Rathbone).

Claim 52 contains limitations that have already been addressed in the rejection of Claim 40, and Claim 52 is rejected for the same reasons as Claim 40.

8. Claims 37, 38, 41-45, 55, 56, 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsey (U.S. Patent Number 5,675,801) in view of Donoho et al. (U.S. Patent Number 6,263,362) and further in view of Meyer (U.S. Patent Number 5,940,296) and Amberg et al. (U.S. Patent Number 5,995,757).

Claim 62 contains limitations that have already been addressed in the rejection of Claims 29, 35, and 26 and is rejected for the same reasons as these Claims.

Claims 37, 38, 41-45, 55, 56, 59-61, and 63 contain limitations which have already been addressed in the rejections of Claims 4, 5, 8-12, 20, 21, 24-26, and 28, respectively, and Claims 35, 37, 38, 41-45, 55, 56, 59-61, and 63 are rejected for the same reasons as these Claims. For specific rejections of Claims 4, 5, 8-12, 20, 21, 24-26, and 28, see the office action mailed on June 6th, 2003.

Response to Arguments

9. Applicant's arguments with respect to claims 29-63 have been considered but are moot in view of the new ground(s) of rejection. Specifically, Claims 29-63 are a new set of Claims, and any arguments with regard to previous rejections in a previous office actions with regard to Claims 1-28 are moot, since Claims 1-28 are cancelled.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Gross whose telephone number is (703) 305-0542. The examiner can normally be reached on Mon-Fri 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KAG

TUAN DAM
SUPERVISORY PATENT EXAMINER